Blockchain In Banking

Pratik Nandalwar[1], Vedant Nemane[1],Shivprasad Lagade[1],Pratik Wagh[1],Prof.Padmavati Sarode[2]

[1]Student, GH Raisoni College of Engineering and management, Pune 412207,India
[2]Professor, GH Raisoni College of Engineering and management, Pune 412207,India

ABSTRACT:

Digital Banking is the website made by using the Blockchain technology. The project "Digital Banking Using Blockchain" is itself tells that it is the banking system used for the transaction of money between different Banks and Costumers of Banks. This paper aims at explaining the architecture of Digital Banking Using Blockchain Technology as well as how it works. Besides various features of the Blockchain, the benefits derived from it are also discussed. The use cases and Blockchain fit assessment has also been performed for few banking transactions.

Keywords: Digital Banking, Blockchain, Transaction, Encryption, P2P (peer to peer).

1. Method

In the presented work, we worked on the Digital Banking System Using Blockchain Technology to overcome the limitations of other banking systems. We made a website for secure transaction of money. In that system we used a main function called Blockchain to keep it very secure and standard. We can also do the transactions of Cryptocurrency through the blockchain technology.

1.1 User Classes

There are three basic users as
   a. User
   b. Admin
   c. Minner

User: The user of be system can be any one he can use the system as for money transactions as their requirement. All users have their own profiles in blockchain banking system. User can create new account, log-in to their existing accounts which will give them the authority to use the services provided by the system. The User can check their account on fund transfer history. The data of all transaction is stored in the format of block chain that is immutable due to which no one can make fraud with government regarding there the fund.

Admin: Admin has authority to add/delete users, he arranges overall management of website but he has no authority to change the transaction happens during purchasing or selling because the data is form of hash code which is immutable and the transaction details store in block chain.

Minner: It a system which manages all transaction done by user. It is the system in the website.

1.2 Modules

Admin Module:
In this Module admin will have full control over this web application. Various fields available on this screen will be:
   ➢   Admin Username
   ➢   Admin Password

Registration Module:
In this Module the user has to enter certain details and choose from an option whether he wants to register as an owneror a tenant. The various fields available on this screen will be: -
   ➢   Username
   ➢   Password
   ➢   Email
   ➢   Contact
   ➢   Address

➢   User id

Login Moule:

This is the Module where the user can to fill up some details to login to his/her profile page. The various fields available on this screen will be:

➢   User ID
➢   Password
➢   Key

Hardware Interfaces:

Screen resolution of at least 800X600 is required for proper and complete viewing of screens. Higher resolution will be accepted.
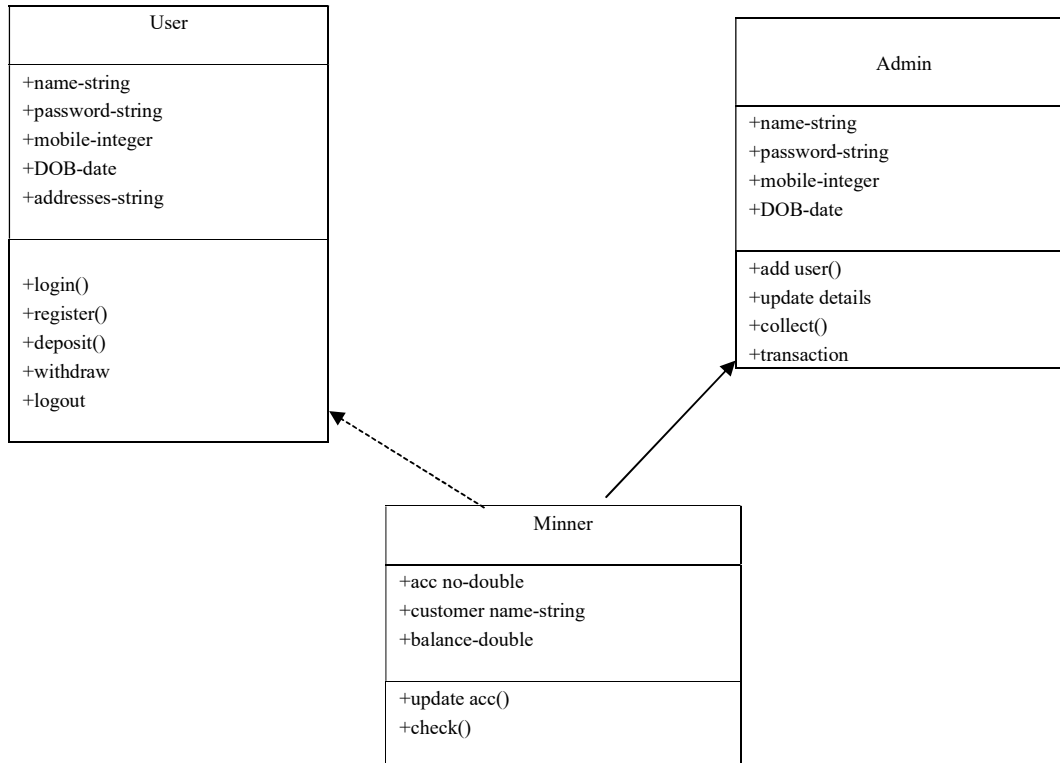
User
+name-string +password-string +mobile-integer +DOB-date +addresses-string
+login() +register() +deposit() +withdraw +logout

Admin
+name-string +password-string +mobile-integer +DOB-date
+add user() +update details +collect() +transaction

Minner
+acc no-double +customer name-string +balance-double
+update acc() +check()

Figure 1. UML Diagram

Database Requirements:

Computers used to access online banking must meet the following minimum requirements:

➢   Standard PC with at least 1-GHz processor and 1 GB of RAM.
➢   Available browser updates applied for improved security.
➢   greater anti-virus and spyware protection.
➢   Internet connectivity.

1.3 Software Requirements

Browser:

➢   Google Chrome.
➢   Mozilla Firefox.
➢   Microsoft Internet Explorer.

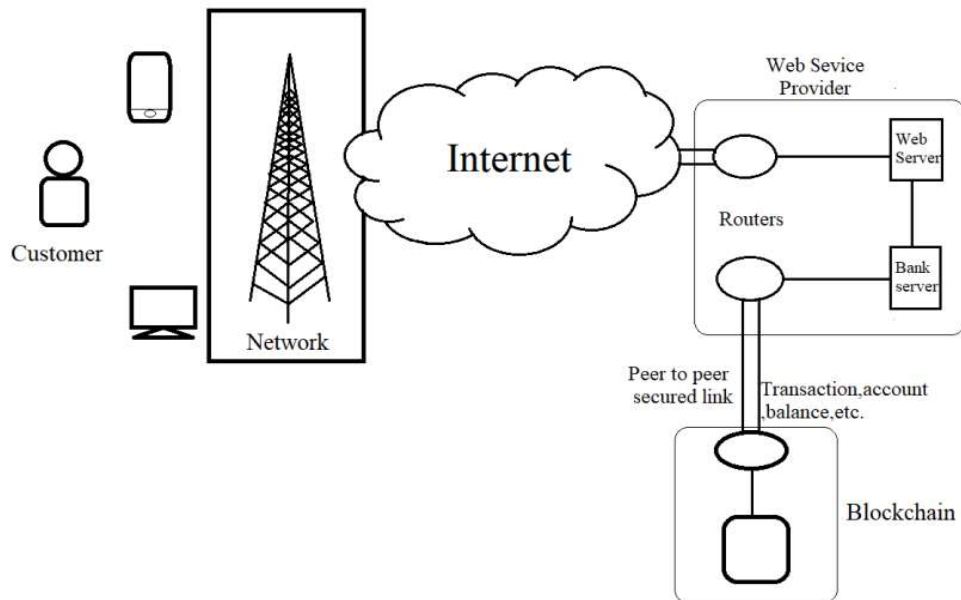*1.4 Hardware Requirements*

Server Side:

➢   Operating System: Windows.

- ➢ Processor: 3 GHz or more.
- ➢ Ram: 256 MB or more.
- ➢ Hard Drive: 10GB or more.

Client Side
- ➢ Operating System: Windows.
- ➢ Processor: 2GHz or more.
- ➢ RAM: 256MB or more.

System Architecture

CONCLUSION:

We tried to demonstrate all the features of our Digital Banking System and tried to overcome the limitations of other similar systems. We conclude that this Banking system is very secure and easy to use. In above points we tried to tell people about our website that we have created. Digital Banking Using Blockchain it's a website by which we can transfer money from one person to another. Financial companies and banks can use blockchain to create a centralized joint register of transactions that is extremely secure. This means there would be no data redundancies and chances of forging would also be reduced as all the transactions are available centrally.

REFERENCES:

1. Abeyratne, S., and Monfared, R. (2016). Blockchain ready manufacturing supply chain using distributed ledger. Int. J. Res. Eng. Technol. 5, 1–10. doi: 10.15623/ijret.2016.0509001

2. Ahn, J.-w., Chang, M. D., Kokku, R., and Watson, P. (2018). Blockchain for Open Scientific Research. Patent Number: 20180323980, Armonk, NY. Available online at: http://www.freepatentsonline.com/y2018/0323980.html

3. Avital, M. (2018). Peer review: toward a blockchain-enabled market-based ecosystem. Commun. Assoc. Inform. Syst. 42, 646–653. doi: 10.17705/1CAIS.04228

4. Baker, M., and Penny, D. (2016). 1,500 scientists lift the lid on reproducibility. Nature 533, 452–454. doi: 10.1038/533452a

5. Bartling, S. (2018). Living Document - Blockchain for Science and Knowledge Creation. Berlin: BFS Blockchain for Science GmbH. Available online at: https://www.blockchainforscience.com/2017/02/23/blockchain-for-open-science-theliving- document/

6. Bartling, S., and Friesike, S. (2014). "Towards another scientific revolution," in Opening Science, Chapter 1, eds S. Bartling and S. Friesike (Cham: Springer), 3–15. doi: 10.1007/978-3-319-00026-8_1

7. Barulli, M., Weigand, F., and Reboh, P. (2017). Bernstein - Product Deck - Blockchain Solutions for Securing Intellectual Property Assets and

Innovation Processes, 1–14. Available online at: https://de.slideshare.net/mbarulli/1702-bernsteinproduct- deck

8. Bayer, D., Haber, S., and Stornetta, W. S. (1993). "Improving the efficiency and reliability of digital time-stamping," in Sequences II, eds R. Capocelli, A. De Santis, and U. Vaccaro (New York, NY: Springer), 329–334. doi: 10.1007/978-1- 4613- 9323-8_24

9. Belluz, J., and Hoffman, S. (2015). The One Chart You Need to Understand Any Health Study. Vox. Available online at: https://www.vox.com/2015/1/5/7482871/types-of-study-design

10. Benchoufi, M., and Ravaud, P. (2017). Blockchain technology for improving clinical research quality. Trials 18:335. doi: 10.1186/s13063-017-2035-z

11. Benet, J. (2014). IPFS - Content Addressed, Versioned, P2P File System (Draft 3). Available online at: https://github.com/ipfs/ipfs/blob/master/papers/ipfs-cap2pfs/ipfs-p2p-file-system.pdf